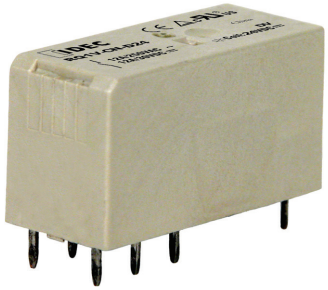
RQ Series PCB Relays

IDEC RQ relays are low-profile, PCB relays in a compact package. Size equals value. RQ relays are small, yet maintain high contact ratings and long operational life. For larger power needs, a 16A model is also available.



Key features:

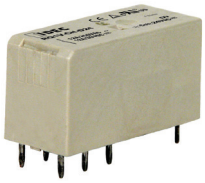
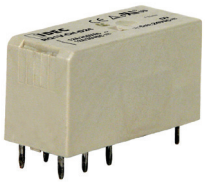
- Low profile:
  29 x 12.7 x 15 mm
- Contact rating:
  8A (DPDT) and 12A (SPDT)
- High capacity model with 16A (SPDT) contact rating
- Operational life:
  100K cycles at full resistive load
  10 million cycles, no load
- LED/Diode Plug-in modules available with DIN rail socket

c UL us® UL Recognized File No. E59804

TÜV Rheinland R500562600001

CE

Part Number Selection

Contact	Model	Part Number Pin Terminal	Coil Voltage Code
SPDT 12A 	Basic	RQ1V-CM-□	A24, A115, A230, D12, D24
SPDT 16A 	HIgh Capacity (HC)	RQ1V-CH-□	A24, A115, A230, D12, D24, D110
DPDT 8A 	Basic	RQ2V-CN-□	A24, A115, A230, D12, D24, D110

Ordering Information
When ordering, specify the Part No. and coil voltage code:

(example) **RQ1V-CM** **A115**
Part No. Coil Voltage Code

Coil Voltage Table

Coil Voltage Code	A24	A115	A230	D12	D24	D110
Coil Rating	24V AC	110-120V AC	220-240V AC	12V DC	24V DC	110V DC

Sockets

Relays	Finger-safe DIN Rail Mount	PCB Mount
RQ1	SQ1V-07B†	SQ1V-63*
RQ2 RQ1 HC	SQ2V-07B†	SQ2V-63*
		

1. *Comes with hold down spring
2. †Comes with retaining clip and marking plate.

Replacement Parts & Accessories

Part Number	Description
SQ9Z-C	Replacement retaining clip
SQ9Z-C63	Replacement hold-down spring for SQ PCB sockets
SQ9Z-J8	8 pt jumper for DIN socket

Part Number	Description
SQ9Z-LD	Diode plug in modules for DIN socket
SQ9Z-LR	RC plug-in module (110-230V AC) for DIN socket
SQ9Z-P	Replacement marking plate

Accessories

Item	Appearance	Use with	Part No.	Remarks
Aluminum DIN Rail (1 meter length)		All DIN rail sockets	BNDN1000	IDEC offers a low-profile DIN rail (BNDN1000). The BNDN1000 is designed to accommodate DIN mount sockets. Made of durable extruded aluminum, the BNDN1000 measures 0.413 (10.5mm) in height and 1.37 (35mm) in width (DIN standard). Standard length is 39" (1,000mm).
DIN Rail End Stop		DIN rail	BNL5	9.1 mm wide.

Specifications

Model (Contact)		RQ1	RQ1 HC	RQ2
No. of poles		1	1	2
Contact Configuration		SPDT	SPDT	DPDT
Contact Rating		12A	16A	8A
Contact Material		Silver-Nickel alloy		
Contact Resistance		100mΩ max		
Operating Time		12 ms		
Release Time		8 ms		
Dielectric Strength	Between contact & coil Between contacts	5,000VAC, 1 minute 1,000VAC, 1 minute		
Vibration Resistance	Damage limits Operating extremes	10-55 Hz, amplitude 1.5mm 10-55 Hz, amplitude 1.5mm		
Shock Resistance	Damage limits Operating extremes	100m/s^2 min (10G) 1,000m/s^2 min (100G)		
Mechanical Life		10,000,000 operations		
Electrical Life @ Full Rated Load		100,000 operations		
Operating Temperature		-40 to 85° C		
Operating Humidity		45 to 85% RH		
Dimensions (H x W x D mm)		29 x 12.7 x 15		
Weight (Approx.)		15g		

Coil Ratings

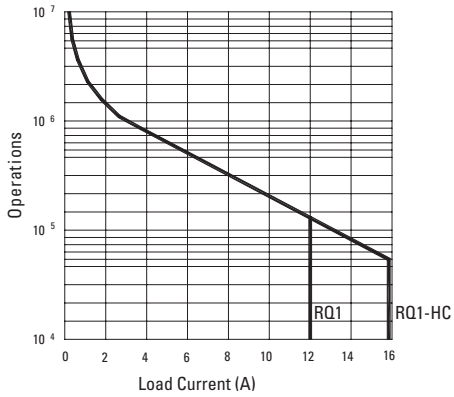
Rated Voltage		Nominal Current 50HZ	Nominal Current 60HZ	Coil Resistance	Power Consumption 50HZ	Power Consumption 60HZ	Pickup Voltage	Dropout Voltage	Max Allowable Voltage
DC	12V	33.3mA		360Ω	0.40W		80% Max	5% Min	130%
	24V	16.7mA		1,440Ω					
	110V	4.1mA		26,530Ω					
AC	24V	29.75mA	25.35mA	350Ω	0.71W	0.61W	80% Max	30% Min	130%
	115V	7.65mA	6.3mA	8,100Ω	0.88W	0.73W			
	230V	3.42mA	2.72mA	32,500Ω	0.79W	0.63W			

Socket Specifications

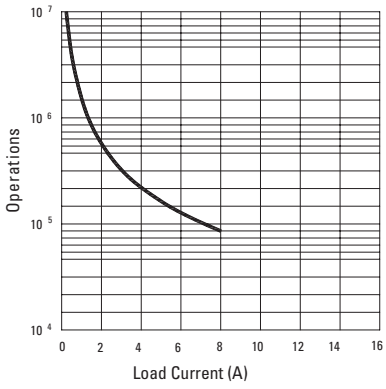
	Relays	Terminal	Electrical Rating	Wire Size	Torque
DIN Rail Sockets	SQ1V-07B	M3 screw with box clamp	300V, 12A	Maximum up to 2 - #14 AWG	1.0N•m Maximum
	SQ2V-07B	M3 screw with box clamp	300V, 8A	Maximum up to 2 - #14 AWG	1.0N•m Maximum
PCB Mount Socket	SQ1V-63	PCB mount	300V, 12A	—	—
	SQ2V-63	PCB mount	300V, 12A	—	—

Electrical Life Curves

RQ1 & RQ1 High Capacity

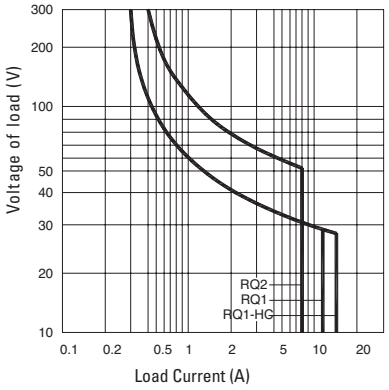


RQ2



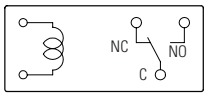
Maximum Switching Capacity

RQ1, RQ1 High Capacity & RQ2

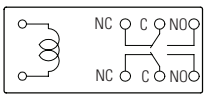


Internal Connection (View from Bottom)

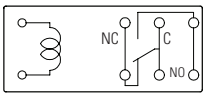
RQ1



RQ2

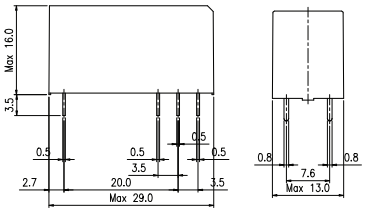


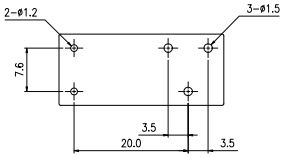
RQ1 HC



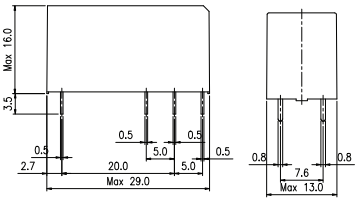
Dimensions (mm)

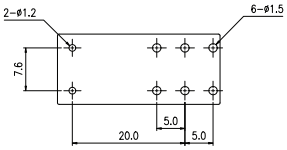
RQ1





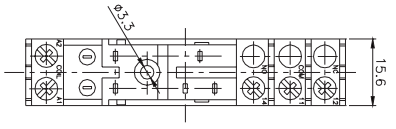
RQ2/RQ1 HC

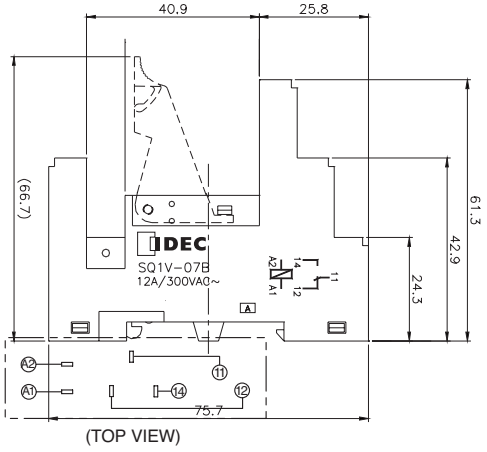




SQ Socket Domensions

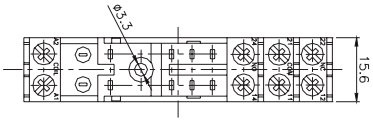
SQ1V-07B

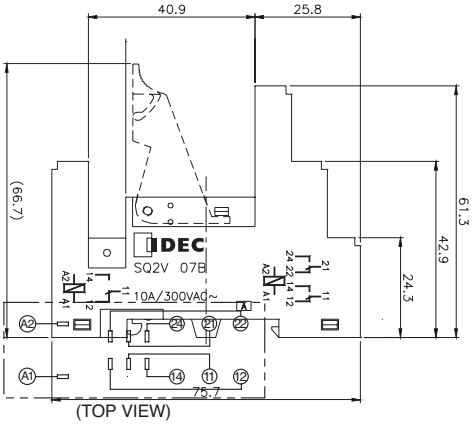




(TOP VIEW)

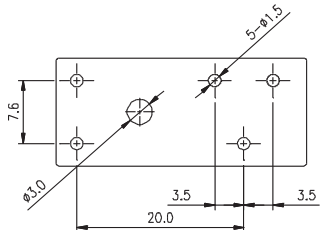
SQ2V-07B



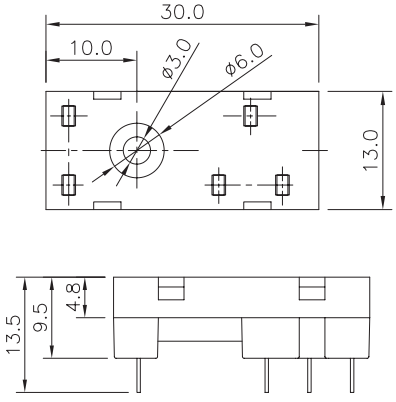


(TOP VIEW)

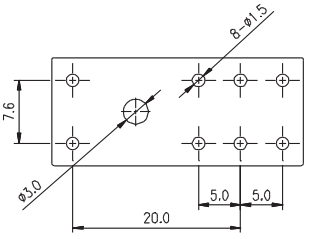
SQ1V-63 PCB Pin Layout



SQ1V-63



SQ2V-63 PCB Pin Layout



SQ2V-63

